

Mr. Louis Jordan
52087 Central Ave
South Bend, IN 46637

September 13, 2002

Dear Louis:

Thank you for your letter September 9, 2002 letter and its fascinating explanatory enclosure.

In this letter I am answering primarily the first sentence of your enclosure.

It is essential for you to read (if you have not) Denis Cooper, The Art and Craft of Coin Making (London 1988, pp. 51-60). This explains the early problem of preventing rotation of the upper die in a screw press and what was done about it.

I lean more and more to the Willow Tree coinage being made in a screw press without proper parts to keep the upper die from turning at the time of striking. There was no such press used for the prior NE coinage as only small hand punches were used . The first coin press used for Willow Tree coinage could have been made in Massachusetts or imported. It was primitive or defective in any event. On many of the pieces both dies rotated resulting in partial images in rotated relationship with no regular amount of rotation and usually with no double striking of the same part of the design. It seems possible that the lower die might be moved in a screw press by virtue of being in an unstamped circular die holder so that the lower die would move along with the rotating upper die in the transfer of rotation through the planchet. It may have been thought that the upper and lower dies would move together and result in a clear striking. How the

planchet was rotated separately by the torque and/or the bounce of the direct impact is a question. When the direct impact was too strong the rotation of the dies might have increased the planchet twist whereas a weaker strike might have turned the lower die without the planchet moving within the dies. All of the Willows are different in the position of parts of the design and letter elements except those few in which the die image is complete on both sides of the coin and those are weak strikes so far as I know. There is no way for a rocker press or sway press to cause die-planchet rotation so consistently.

The striking impact and the torque pressure both had to be absorbed and the combination certainly could make the striking pressure and bounce uneven.

It is clear there was no circular planchet cutter for the Willows. If a planchet cutting screw press was available that would have required at least one extra piece of machinery and the planchet cutter would not prevent hand cutting after striking unless they had a roller press to make strips of uniform thickness. They were making sheets by hand hammering and that would not produce uniform enough thickness to use a screw press for planchet cutting and get planchets of proper weight.

In addition to Cooper's material there is an illustration of a screw press which seems to have a rotating top die in "Essay on Coining" by Samuel Thompson, Dublin, 1783 which is a manuscript at ANS. It has illustrations of a planchet cutter screw press and a coining screw press. (See those illustrations in Don Taxay, U.S. Mint and Coinage (NY 1966). Also the screw press for coinage in Walter Breen's Encyclopedia of Early U.S. Cents, 1793-1814 (New Hampshire, 2001).

Mr. Louis Jordan
52087 Central Ave
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September 30, 2002

Dear Louis:

I feel I should modify the content of my September 16, 2002 letter to you concerning the minting method for the Willow Tree coinage. I realize this may not be a matter which is of major interest to you, but merely want to inform you of a change in my direction of thought about the puzzlement arising from the position of design elements on most Willow Tree coinage.

Ken Bressett has now convinced me that my thinking on screw press strikings is not sound. He feels that if they had a screw press for Willows they would never have gone backward to a rocker press or sway press for the Oak Tree and the large size Pine Tree coinage. He feels that a hand hammered striking is the probable method for Willows. When hammer striking is used the planchet would be hand placed on the lower die whether the die was countersunk in a tree trunk base or otherwise mounted or held. Then the upper die whether it was hand held or tongs held would be struck by a blow from a hammer. The strike could be too strong, too weak, off center, tilted etc. often requiring another blow because of inexperienced workmen. The planchet would expand radially during striking. It could stick to either die or move radially or jump out. The thickness of the planchet would not be uniform because the metal was first hammered into sheet and not made from rolled sheet. A cookie cutter might have been helpful to cut

planchets out of a sheet but due to lack of uniform thickness the struck coin would have to be further clipped in any event to reach proper weight. They had no cookie cutter of the screw press type as you know from reviewing Oak Tree coinage and large Pine Tree coinage struck later. Use of a cookie cutter after striking Willow Tree coinage is not indicated on Willow Tree examples.

Ken feels that strips were not used for that hand minting; just individual cut outs of convenient shape. For a second blow the upper die would be somewhat rotated in position because it was never confined. The planchet may have moved somewhat during striking or might have had to be replaced on the lower die again for a second strike if it jumped out or moved after the first strike. The planchet after being struck might not have been placed directly over the lower die because of the planchet expansion or bounce.

Both sides of Willows usually have rotated impressions rather than direct overlapping impressions. These design positions led me to select the screw press as the only reasonable source for the design positions because a primitive screw press could have had the torque motion and impact bounce that could explain those rotations. As to hand hammering Ken has concluded that almost anything could happen, as the upper die would always be in a different rotated position on the second strike from the first strike. How a second blow in hand hammering would seem to shift the lower die is a problem as it might have become somewhat loose in its wooden holder and shift position slightly or the planchet could slip into a different position during the first strike or move due to planchet expansion. Ken is an expert on English hammered coinage but for now has no specific explanation of the weird results of Willow Tree coinage. He and I will think about the problem further. Perhaps you can add to our thoughts by looking at the images